



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,588	10/16/2001	Eng-Whatt Toh	20735-05504	7225

7590

06/09/2005

Robert N. Blackmon
MEREK, BLACKMORE & VOORHEES, LLC
673 S. Washington ST
Alexandria, VA 22314

EXAMINER

PATEL, NIRAV B

ART UNIT	PAPER NUMBER
----------	--------------

2135

DATE MAILED: 06/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/981,588

Applicant(s)

TOH ET AL.

Examiner

Nirav Patel

Art Unit

2135

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-79 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-79 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/16/2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the application filed on 10/16/2001.
2. Claims 1-79 are under examination.

Specification

3. The disclosure is objected to because of the following informalities:

Detailed description of figure 3 on page number 11 refers the same number to two different components (An input device 312 and An addressable memory 312).

Appropriate correction is required.

Drawings

4. The drawing (Fig. 3) is objected to as failing to comply with 37 CFR 1.84(p)(4) because devices referring to an input device and an addressable memory share the same number 312. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1-79 are rejected under 35 U.S.C 101 because the claimed invention is directed to non-statutory subject matter.

As per claim 1 is rejected under 35 U.S.C 101 because the claimed invention is directed to non-statutory subject matter.

Claim 1 recites "a computer-readable medium storing a universal signature object for binding a digital signature to digital data, the universal signature object comprising: at least one version of the digital data, wherein each version has a file format; a digital signature of signature data, wherein the signature data is a function of the digital data; and information concerning an application compatible with the file format of at least one of the versions". Claim 1 is merely stored so as to be read or outputted by a computer without creating any functional interrelationship, either as part of the stored data or as part of the computing processes performed by the computer, then such descriptive material alone does not impart functionality either to the data as so structured, or to the computer. Therefore, claim 1 recites non-statutory subject matter.

Claims 2-28 depend on claim 1, therefore they are rejected with the same rationale applied against claim 1 above.

Art Unit: 2135

Claim 29 has limitations those are similar to limitations of claim 1 and 26, thus it is rejected with the same rationale applied against claim 1 above. Claims 30-44 depend on claim 29, therefore they are rejected with the same rationale applied against claim 29.

As per claim 45 is rejected under 35 U.S.C 101 because the claimed invention is directed to non-statutory subject matter.

Claim 45 recites "a method for digitally signing digital data, comprising: accessing a signatory's private-public key pair; authenticating the private-public key pair; and in response to a universal signature object of the digital data not existing: using the signatory's private key to generate a digital signature of signature data, wherein the signature data is a function of the digital data; and generating the universal signature object of the digital data, the universal signature object comprising: at least one version of the digital data, wherein each version has a file format; the digital signature; and information concerning an application compatible with the file format of at least one of the versions". Claim 45 is a method something that can be done by person as a mental step or using pencil and paper. Claim 45 is directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a concrete, useful and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101. Therefore, claim 45 recites non-statutory subject matter.

Art Unit: 2135

Claims 46-60 depend on claim 45, therefore they are rejected with the same rationale applied against claim 45 above.

As per claim 61 is rejected under 35 U.S.C 101 because the claimed invention is directed to non-statutory subject matter.

Claim 61 recites "a signing program for binding a digital signature to digital data, the signing program comprising: a key-accessing means for accessing a signatory's private-public key pair; a key-verification means for authenticating the private-public key pair; a universal-signature-object generating means for, in response to a universal signature object of the digital data not existing: using the signatory's private key to generate a digital signature of signature data, wherein the signature data is a function of the digital data; and generating the universal signature object of the digital data, the universal signature object comprising: at least one version of the digital data, wherein each version has a file format; the digital signature; and information concerning an application compatible with the file format of at least one of the versions". Claim 61 is recited a computer program per se representing functional descriptive material without a computer and/or a computer readable medium, and thus is non-statutory.

Claims 62-79 depend on claim 61, therefore they are rejected with the same rationale applied against claim 61 above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-6, 9, 14, 15, 17, 22-24 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pham et al. (US 6,282,535) and in view of Herrmann (US 5,995,756).

As per claim 1, Pham discloses:

A computer-readable medium storing a universal signature object for *binding a digital signature to digital data* [**col. 2 lines 23-24 "A digital signature is calculated for every file or container of files, as it is being WRAPPED (packaged)"**], the universal signature object comprising:

at least one version of the digital data, wherein each version has a file format [**col. 3 lines 34-36 "developing specialized multiple native files and, a directory into a container with digital signature option"**];

a digital signature of signature data, wherein the signature data is a function of the digital data (for example, the signature data could be any of version of the digital data) [**col. 2 lines 23-24 "A digital signature is calculated for every file of container of files"**]; and

information with the file format of at least one of the versions [**Fig. 3A Disk file header col. 12 lines 10-12 "beginning data block containing an identification string; (ii) options chosen; (iii) the original file's Disk File Header information"**].

Pham doesn't explicitly disclose that information concerning an application compatible with file.

However, Herrmann discloses that information concerning an application compatible with file [**col. 3 lines 41-45** "**application contains information necessary to create a document (e.g., Microsoft ActiveX Document) locally but, in addition, also includes information necessary to find and download the program code for rendering the view of the document**"].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Herrmann into the teaching of Pham to include information concerning an application compatible with file. The modification would be obvious because one of ordinary skill in the art would be motivated to have information about an application within files, so files can be created or viewed locally [**Herrmann, col. 3 lines 41-45**].

As per claim 2, the rejection of claim 1 is incorporated and further Pham discloses:

the file format of at least one version is a *native file format* of the digital data [**col. 3 lines 34-35** "**developing specialized multiple native files and a directory into a container**"].

As per claim 3, the rejection of claim 1 is incorporated and further Pham discloses:

Art Unit: 2135

the file format of at least one version is compatible with *more than one application* [**col. 2 lines 60-63** “provide a format that is utilizable not just for a first system, but also for a first and second system, whereby the second system would not ordinarily be compatible with the first system”].

As per claim 4, the rejection of claim 1 is incorporated and further Pham discloses:

the file format of at least one version is an *alternate file format* [**col.5 lines 55-57** “new format file: the Byte-Stream data file that results from executing the wrap process on an a series file”].

As per claim 5, the rejection of claim 4 is incorporated and further Pham discloses:

the information with the file format of at least one of the versions *includes information* with the alternate file format [**Fig. 3A Disk file header col. 12 lines 10-12** “beginning data block containing an identification string; (ii) options chosen; (iii) the original file's Disk File Header information”].

Pham doesn't explicitly disclose that information concerning an application compatible with file.

However, Herrmann discloses that information concerning an application compatible with file [**col. 3 lines 41-45** “application contains information necessary to create a document (e.g., Microsoft ActiveX Document) locally but, in addition,

also includes information necessary to find and download the program code for rendering the view of the document”].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Herrmann into the teaching of Pham to include information concerning an application compatible with file. The modification would be obvious because one of ordinary skill in the art would be motivated to have information about an application within files, so files can be created or viewed locally.

As per claim 6, the rejection of claim 5 is incorporated and further Pham discloses:

includes an embedded *executable file* (or software) of the alternate application **[col. 3 lines 48-50 “to put the NT platform software (alternate software) and the A Series platform software all on the same CD-ROM”].**

Pham doesn’t explicitly disclose that information concerning an application compatible with file.

However, Herrmann discloses that information concerning an application compatible with file **[col. 3 lines 41-45 “application contains information necessary to create a document (e.g., Microsoft ActiveX Document) locally but, in addition, also includes information necessary to find and download the program code for rendering the view of the document”].**

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Herrmann into the teaching of Pham to include information concerning an application compatible with file. The modification would be obvious because one of ordinary skill in the art would be motivated to have information about an application within files, so files can be created or viewed locally.

As per claim 9, the rejection of claim 4 is incorporated and further Pham discloses:

a public key, corresponding to a private key *used to generate* the digital signature [**col.5 66-67, col. 6 lines 1-3 “public and private key pairs are generated at the same time by a special utility. These key pairs are used to create a signature”**].

As per claim 14, the rejection of claim 1 is incorporated and is rejected for the same reason set forth in the rejection of claim 5 above.

As per claim 15, the rejection of claim 1 is incorporated and is rejected for the same reason set forth in the rejection of claim 6 above.

As per claim 17, the rejection of claim 1 is incorporated and is rejected for the same reason set forth in the rejection of claim 9 above.

As per claim 22, the rejection of claim 1 is incorporated and further Pham discloses:

use-permission information regarding permitted use of the universal signature object **[col. 4 lines 54-57 “Native attributes that can be assigned to a file to allow the system to control how the file is accessed and used, and by whom (security privileges)”]**.

As per claim 23, the rejection of claim 1 is incorporated and further Pham discloses:

the universal signature object is compressed **[col. 5 lines 8-10 “hash pattern created by applying an industry standard signaturing algorithm (similar to a checksum) to a file or data stream”]**.

As per claim 24, the rejection of claim 1 is incorporated and further Pham discloses:

the universal signature object is encrypted **[col. 6 lines 11-14 “a common methodology for encrypting files so they may be transported across an open network so as to use a public/private password encryption scheme”]**.

As per claim 28, the rejection of claim 1 is incorporated and Pham does not explicitly disclose the application compatible with the file format of at least one of the versions includes said version.

However, Hermann discloses the application compatible with the file format of at least one of the versions includes said version **[col. 3 lines 41-42 “contains information necessary to create a document (e.g., Microsoft ActiveX Document) locally”]**.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Herrmann into the teaching of Pham to have the application that is compatible with the file format of at least one of the versions. The modification would be obvious because one of ordinary skill in the art would be motivated to have application which is compatible with the file format so that file can be created or edited locally.

7. Claims 7, 8, 10, 11-13, 16, 18-21, 25, 27, 45-48, 50-53, 55-58, 60-63, 66-69, 71-74, 77 and 78 are rejected under 35 USC 103 (a) for being unpatentable over Pham et al. in view of Herrmann, and further in view of Brown et al (U.S. Patent No. 6,671,805).

As per claim 7, the rejection of claim 4 is incorporated and further Pham discloses:

the signature data (function of the digital data) is *selected from the group* comprising: *one of the versions* of the digital data**[col. 3 lines 34-35 “developing specialized multiple native files and a directory into a container”]**;

the universal signature object (or file), *prior to* inclusion of the digital signature **[col. 3 lines 34-35 “developing specialized multiple native files and a directory into a container”]**;

Pham and Herrmann don't explicitly disclose hash of the digital data prior to inclusion of the digital signature.

Brown discloses hash of the digital data prior to inclusion of the digital signature **[Fig. 1 col. 9 lines 4-8 "calculating a message digest for the to-be-signed portion (the message digest is calculated using a one-way hash function)"]**.

a hash of one of the versions of the digital data **[Brown, Fig 1 col. 9 lines 4-8 "calculating a message digest for the to-be-signed portion. The message digest is calculated using a one-way hash function"]**;

and *a hash of the universal signature object*, prior to inclusion of the digital signature **[Brown, Fig. 1 col. 9 lines 4-8 "calculating a message digest for the to-be-signed portion. The message digest is calculated using a one-way hash function"]**.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Brown et al. into the teaching of Pham and Herrmann to calculate message digest (using one way hash function) for the digital data. The modification would be obvious because one of ordinary skill in the art would be motivated to use hash function (digest message) whereby any change to the data will result in a different calculated message digest, in order to ensure the data has not been compromised (intentionally or otherwise) during the transfer process.

As per claim 8, the rejection of claim 4 is incorporated. Pham and Herrmann don't explicitly disclose that the digital signature is timestamped.

However, Brown discloses the digital signature is *timestamped* [**col.26 lines 14-16** “Each digital signature 118 in the document 102 is time and date stamped and includes a digital certificate for verification purposes”].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Brown into the teaching of Pham and Herrmann that digital signature is timestamped. The modification would be obvious because one of ordinary skill in the art would be motivated to use timestamp with digital signature so that it identifies the date and time at which the signer signs the file [**Brown, col. 13 lines 41-43**].

As per claim 10, the rejection of claim 4 is incorporated. Pham and Herrmann don't explicitly disclose an *additional digital signature* by an additional signatory.

However, Brown discloses an additional digital signature by an additional signatory of additional signature data [**col. 5 lines 17-18** “computer-implemented method for digitally signing an electronic document by a plurality of signers, wherein each signer has a signing role”].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Brown into the teaching of Pham and Herrmann to use additional digital signature by an additional signatory. The modification would be obvious because one of ordinary skill in the art

Art Unit: 2135

would be motivated to have additional signature(s) corresponding to signer(s) for additional requirements or verifications.

As per claim 11, the rejection of claim 10 is incorporated and is rejected for the same reason set forth in the rejection of claim 7 above.

As per claim 12, the rejection of claim 10 is incorporated and is rejected for the same reason set forth in the rejection of claim 8 above.

As per claim 13, the rejection of claim 1 is incorporated and is rejected for the same reason set forth in the rejection of claim 7 above.

As per claim 16, the rejection of claim 1 is incorporated and is rejected for the same reason set forth in the rejection of claim 8 above.

As per claim 18, the rejection of claim 1 is incorporated and is rejected for the same reason set forth in the rejection of claim 10 above.

As per claim 19, the rejection of claim 18 is incorporated and is rejected for the same reason set forth in the rejection of claim 7 above.

As per claim 20, the rejection of claim 18 is incorporated and is rejected for the same reason set forth in the rejection of claim 8 above.

As per claim 21, the rejection of claim 18 is incorporated and is rejected for the same reason set forth in the rejection of claim 9 above.

As per claim 25, the rejection of claim 1 is incorporated. Pham and Herrmann don't explicitly disclose a universal-signature-object viewer for utilizing the universal signature object.

Brown discloses *viewer for utilizing* the universal signature object [**col. 13 lines 19-21 FIG. 4D, "a Web browser is used to display and/or edit the XML-encoded document 102 using conventicinal techniques"**].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Brown et al. into the teaching of Pham and Herrmann to have a viewer to utilize the universal signature object. The modification would be obvious because one of ordinary skill in the art would be motivated to have the viewer (browser) is to display and/or edit the documents.

As per claim 27, the rejection of claim 1 is incorporated. Pham and Herrmann don't explicitly disclose a signing program for modifying the universal signature object to include an additional digital signature.

However, Brown discloses a *signing program for modifying* the universal signature object to include an additional digital signature **[Fig. 1 component 108 (signing module) col.6 lines 12-14 “digitally signing an electronic document by a plurality of signers, wherein each signer has a signing role”]**.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Brown into the teaching of Pham and Herrmann to include an additional digital signature. The modification would be obvious because one of ordinary skill in the art would be motivated to have additional signature(s) corresponding to signer(s) for additional requirements or verifications.

As per claim 45, this claim has limitations those are similar to limitations of claim 1, thus it is rejected with the same rationale applied against claim 1 above and further Brown discloses:

A method for digitally signing digital data, comprising:

accessing a signatory's private-public key pair **[col. 11 lines 1-3 “a variety of techniques may be used to authenticate the signer. However, public key cryptography offers a particularly secure method for authentication”]**; authenticating the private-public key pair **[col. 2 lines 37-38 “using public key cryptography, however, a sender can digitally “sign” a message using the sender's private key”]**; and

Art Unit: 2135

in response to a universal signature object of the digital data not existing [(i.e. signature require) col. 13 lines 23-24 Fig. 3, “receiving 318 from the signer an indication to sign the document 102”]:

using the signatory's private key to generate a digital signature of signature data[*col. 13 lines 61-63* “the method continues by encrypting 322 the message digest using the signer's private key to generate the signer's digital signature 118”].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Brown into the teaching of Pham and Herrmann to access a signatory's key pair and authenticate the key pair. The modification would be obvious because one of ordinary skill in the art would be motivated to use public key cryptography, which offers a particularly secure method for authentication. The CA is a trusted third party that issues digital certificates to its subscribers, binding their identities to the key pairs they use to digitally sign electronic communications [**Brown, col. 22 lines 30-33**].

As per claim 46, the rejection of claim 45 is incorporated and is rejected for the same reason set forth in the rejection of claim 7 above.

As per claim 47, the rejection of claim 45 is incorporated and is rejected for the same reason set forth in the rejection of claim 8 above.

As per claim 48, the rejection of claim 47 is incorporated and further Brown discloses:

the signatory verifies the *authenticity* of the private-public key pair and provides the *timestamp* [**Fig. 3 step 304 (Authenticate signer) and step 320 (store date and time of signing)**].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Brown into the teaching of Pham and Herrmann to verifies the authenticity of the private-public key pair and provides the timestamp. The modification would be obvious because one of ordinary skill in the art would be motivated to use the date and time tags (timestamp), making it impossible for the signer to later repudiate the date and time of the digital signature.

As per claim 50, the rejection of claim 45 is incorporated and is rejected for the same reason set forth in the rejection of claim 4 above.

As per claim 51, the rejection of claim 45 is incorporated and further Brown discloses:

the universal signature object further comprises: the signatory's public key [**"col. 11 lines 12-13 decrypt the message using the signer's public key, which may be obtained from public key database or the like using a standard protocol"**].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Brown into the teaching of Pham and Herrmann to have signatory's public key. The modification would be obvious because one of ordinary skill in the art would be motivated to use signatory's public key to decrypt the message digest.

As per claim 52, the rejection of claim 45 is incorporated and is rejected for the same reason set forth in the rejection of claim 22 above.

As per claim 53, the rejection of claim 45 is incorporated and is rejected for the same reason set forth in the rejection of claim 25 above.

As per claim 55, the rejection of claim 45 is incorporated and is rejected for the same reason set forth in the rejection of claim 27 above.

As per claim 56, the rejection of claim 45 is incorporated and further Brown discloses:

in response to the universal signature object of the digital data existing **[(i.e. signature require) col. 13 lines 23-24 Fig. 3, receiving 318 from the signer an indication to sign the document 102]**:

Art Unit: 2135

using the *signatory's private key to generate* a digital signature of signature data[**col.13 lines 61-63** “the method continues by encrypting 322 the message digest using the signer's private key to generate the signer's digital signature 118”]; and modifying the universal signature object to include an additional digital signature [Fig.1 component 108 (signing module) **col.6 lines 12-14** “digitally signing an electronic document by a plurality of signers, wherein each signer has a signing role”].

As per claim 57, the rejection of claim 56 is incorporated and is rejected for the same reason set forth in the rejection of claim 7 above.

As per claim 58, the rejection of claim 57 is incorporated and is rejected for the same reason set forth in the rejection of claim 8 above.

As per claim 60, the rejection of claim 57 is incorporated and is rejected for the same reason set forth in the rejection of claim 51 above.

As per claim 61, this claim has limitations those are similar to limitations of claim 1 and claim 45, thus it is rejected with the same rationale applied against claim 1 and 45 above.

As per claim 62, the rejection of claim 61 is incorporated and is rejected for the same reason set forth in the rejection of claim 7 above.

As per claim 63, the rejection of claim 61 is incorporated and is rejected for the same reason set forth in the rejection of claim 8 above.

As per claim 66, the rejection of claim 61 is incorporated and is rejected for the same reason set forth in the rejection of claim 4 above.

As per claim 67, the rejection of claim 61 is incorporated and is rejected for the same reason set forth in the rejection of claim 51 above.

As per claim 68, the rejection of claim 61 is incorporated and is rejected for the same reason set forth in the rejection of claim 22 above.

As per claim 69, the rejection of claim 61 is incorporated and is rejected for the same reason set forth in the rejection of claim 25 above.

As per claim 71, the rejection of claim 61 is incorporated and is rejected for the same reason set forth in the rejection of claim 27 above.

As per claim 72, the rejection of claim 61 is incorporated and is rejected for the same reason set forth in the rejection of claim 56 above.

Art Unit: 2135

As per claim 73, the rejection of claim 72 is incorporated and is rejected for the same reason set forth in the rejection of claim 7 above.

As per claim 74, the rejection of claim 72 is incorporated and is rejected for the same reason set forth in the rejection of claim 8 above.

As per claim 77, the rejection of claim 61 is incorporated and further Brown discloses:
signing program is integrated with a primary application to provide digital signing capability for the files utilized by the primary application [**col. 8 lines 66-67,col. 9 lines 1-2 the signing module 108 is implemented as a "plug-in" module to a standard Web browser, although other implementations are possible without departing from the spirit of the invention"**].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Brown into the teaching of Pham and Herrmann to integrate signing program with a primary application. The modification would be obvious because one of ordinary skill in the art would be motivated to increase the security level during creation of files.

As per claim 78, the rejection of claim 61 is incorporated and further Brown discloses:

Art Unit: 2135

The signing program operates within a browser application [**col. 8 lines 66-67, col. 9 lines 1-2** “the signing module 108 is implemented as a “plug-in” module to a standard Web browser”].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Brown into the teaching of Pham and Herrmann to operate viewer within a browser application. The modification would be obvious because one of ordinary skill in the art would be motivated to do so because browsers often work on multiple operating systems, the problem of porting a browser-based application from one OS to another is removed.

8. Claims 26, 29-36, 40-44, 54, 70 and 79 are rejected under 35 USC 103 (a) for being unpatentable over Pham et al. in view of Herrmann, in view of Brown et al and further in view of Colwell et al (U.S. Patent No. 5,303,361).

As per claim 26, the rejection of claim 25 is incorporated and Brown discloses that viewer for utilizing the universal signature object. Brown doesn't explicitly disclose that launching the application compatible with the file format of at least one of the version and displaying information concerning the universal signature object.

However, Colwell discloses an application launching means for *launching the application compatible with the file format* of at least one of the versions [**col. 2 lines 33-36** “the user can invoke the software application which created the file by

Art Unit: 2135

loading the application corresponding to the viewer along with the desired file”];
and

a viewer means for *displaying information concerning* the universal signature object
[*col. 2 lines 23-27* “the file is tested to determine which one of a plurality of file
viewers to deploy. The closest corresponding viewer is automatically loaded and
used to display consecutive screens of information from the selected file”].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Colwell into the teaching of Brown that launching the application compatible with the file format of at least one of the version and displaying information concerning the universal signature object. The modification would be obvious because one of ordinary skill in the art would be motivated because the user can find required applications without additional time being spent on search. One of ordinary skill in the art would be also motivated to make such modifications for viewer to display consecutive screens of information from the selected file [Colwell, col. 2 lines 33-44].

As per claim 29, this claim has limitations those are similar to limitations of claim 1 and claim 26, thus it is rejected with the same rationale applied against claim 1 and 26 above.

As per claim 30, the rejection of claim 29 is incorporated and further Brown discloses: the information displayed by the viewer comprises *at least one data field from the group of data fields* comprising:

use-permission information regarding *permitted use of* the universal signature object [**col. 12 lines 14-27 “any portion of the document 102 is access restricted, or in other words, whether any portion of the document 102 should not be displayed to, or modified by the signer”**];

a list of items contained within the universal signature object [**col. 10, lines 18-19 “Fig. 4B displays a list 404 of possible documents 102 to be signed by the signer” col.10 lines 26-30 “The list 404 may be generated in a number of ways. For example, as described more fully hereafter, the parser 106 may parse a plurality of documents 102”**];

a digital signature [**Brown, Fig. 4D**];

a name of a signatory of the digital signature [**Brown, Fig. 4B**];

a timestamp of the digital signature [**Brown, Fig. 4B**]; and

digital signature verification results [**Brown, Fig. 4E**].

As per claim 31, the rejection of claim 29 is incorporated. Pham and Herrmann don't explicitly disclose an edit disabling means for disabling editing capabilities of the application.

However, Brown discloses an edit disabling means for disabling *editing capabilities* of the application [**col. 12 lines 14-19 “any portion of the document 102**

Art Unit: 2135

is access restricted, or, in other words, whether any portion of the document 102 should not be displayed to, or modified by the signer”].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Brown into the teaching of Pham and Herrmann to disable editing capability. The modification would be obvious because one of ordinary skill in the art would be motivated to do so because user can not modified the file without the authorized permission.

As per claim 32, the rejection of claim 29 is incorporated and Brown doesn't explicitly disclose searches a computer system on which the universal-signature-object viewer operates to locate the application compatible with the file format of at least one of the versions.

However, Colwell discloses the application launching means searches a computer system on which the universal-signature-object viewer operates to locate the application compatible with the file format of at least one of the versions **[col. 2 lines 33-36 “invoke the software application which created the file by loading the application corresponding to the viewer along with the desired file”].**

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Colwell into the teaching of Brown to search a computer system on which the universal-signature-object viewer operates to locate the application compatible with the file format. The modification would be obvious because one of ordinary skill in the art would be

motivated to invoke the software application that creates the files for the corresponding viewer.

As per claim 33, the rejection of claim 29 is incorporated and is rejected for the same reason set forth in the rejection of claim 6 above.

As per claim 34, the rejection of claim 29 is incorporated and is rejected for the same reason set forth in the rejection of claim 32 above.

As per claim 35, the rejection of claim 29 is incorporated. Pham and Herrmann don't explicitly disclose a verification means for verifying the digital signature.

However Brown discloses a verification means for verifying the digital signature [**Brown, Fig.7 component 710 (signature verification service)**].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Brown into the teaching of Pham and Herrmann to verifying the digital signature. The modification would be obvious because one of ordinary skill in the art would be motivated to verify the signature by utilizing some entity to serve as a trusted third party to vouch for the person's identity [**Brown, col. 22 lines 30-33**].

As per claim 36, the rejection of claim 29 is incorporated. Pham and Herrmann don't explicitly disclose the verification means verifies the digital signature against an archived copy of the digital signature obtained from a transaction server.

However Brown discloses the verification means *verifies the digital signature* against an archived copy of the digital signature obtained from a transaction server [Brown, Fig. 7 and 8F *col. 22 lines 52-57* “the method begins by identifying 862 the signature 118 to be verified”].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Brown into the teaching of Pham and Herrmann to verifying the digital signature. The modification would be obvious because one of ordinary skill in the art would be motivated to verify the signature by utilizing some entity to serve as a trusted third party to vouch for the person's identity [Brown, *col. 22 lines 30-33*].

As per claim 40, the rejection of claim 29 is incorporated and further Brown discloses:

the universal signature object further comprises:

at least one *additional digital signature* [*col. 5 lines 17-18* “computer-implemented method for digitally signing an electronic document by a plurality of signers, wherein each signer has a signing role”];

the digital signatures are *timestamped* [*col.26 lines 14-16* “Each digital signature 118 in the document 102 is time and date stamped and includes a digital certificate for verification purposes”]; and

the viewer means displays the digital signature in *timestamp order* [Fig.4A (displayed according to the date order) *col.10 lines 38-41* “to sign in the proper order relative

Art Unit: 2135

to the other signers of the document 102. It is advantageous in many instances for a document 102 to be signed in a particular order”].

As per claim 41, the rejection of claim 29 is incorporated and further Brown discloses:

the universal-signature-object viewer operates *within a browser application* **[Fig. 4A Internet Explorer (i.e. browser application)]**.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Brown into the teaching of Pham and Herrmann to operate viewer within a browser application. The modification would be obvious because one of ordinary skill in the art would be motivated to do so because browsers often work on multiple operating systems, the problem of porting a browser-based application from one OS to another is removed.

As per claim 42, the rejection of claim 29 is incorporated and further Brown discloses:

the universal-signature-object viewer is *incorporated into* the universal signature object **[Fig. 4D, As shown in figure viewer incorporated with digital signed document]**.

As per claim 43, the rejection of claim 42 is incorporated and further Pham discloses:

the universal signature object is a *standalone application* **[col.3 lines 38-42 “containers can also be burnt together with files originated from other platforms**

onto the same industry-standard Compact Disks (CD-ROMs) which then can be viewed and utilized by a variety of systems”].

As per claim 44, the rejection of claim 29 is incorporated and further Brown discloses:

the universal-signature-object viewer is a network application accessible via a network connection **[Fig. 4A and 5 viewer application can be access via network 504].**

As per claim 54, the rejection of claim 53 is incorporated and is rejected for the same reason set forth in the rejection of claim 26 above.

As per claim 70, the rejection of claim 69 is incorporated and is rejected for the same reason set forth in the rejection of claim 26 above.

As per claim 79, the rejection of claim 61 is incorporated and is rejected for the same reason set forth in the rejection of claim 43 above.

9. Claims 37-39, 49, 59, 64, 65, 75 and 76 are rejected under 35 USC 103 (a) for being unpatentable over Pham et al. in view of Herrmann, in view of Brown et al, Colwell et al and further in view of Houser et al. (U.S. Patent No. 5,606,609).

As per claim 37, the rejection of claim 29 is incorporated. Herrmann and Brown don't explicitly disclose a print copy of information concerning the universal signature object.

However Houser discloses a printing means for *providing a print copy* of information concerning the universal signature object **[col. 18 lines 57-60 "the document reviewer may also print the electronic document on a conventional printer. In such a case, the electronic chop will print substantially as displayed to produce a printed chop"]**.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Houser into the teaching of Herrmann and Brown to add printer for providing a print copy of information concerning the universal signature object. The modification would be obvious because one of ordinary skill in the art would be motivated to do so because electronics document may be printed using a printer.

As per claim 38, the rejection of claim 37 is incorporated and is rejected for the same reason set forth in the rejection of claim 30 above.

As per claim 39, the rejection of claim 37 is incorporated. Herrmann and Brown don't explicitly disclose the print means digitally watermarks the print copy.

However Houser discloses the print means *digitally watermarks* the print copy **[col.6 lines 30-33 "include an electronic watermark generator that generates**

an electronic watermark which produces a printed watermark when printed using the printer”].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Houser into the teaching of Herrmann and Brown to add the watermarks the print copy. The modification would be obvious because one of ordinary skill in the art would be motivated to do so because that generates an electronic watermark, which produces a printed watermark when printed using the printer. Thereby make it difficult to forge a paper copy of the document [**Houser, col. 18 lines 63-64**].

As per claim 49, the rejection of claim 45 is incorporated. Herrmann and Brown don't explicitly disclose tracking number and transmitting at least a copy of the digital signature.

However, Houser discloses requesting a *tracking number* from a transaction server [**Fig.6 component 612 (serial number generator), Fig. 4B component 427 (serial number)**]; and *transmitting at least a copy of the digital signature to the transaction server* [**Fig.1 component 140 (store and/or forward) col. 8 lines 58-61 “the computer may be coupled to a local area network (LAN) such as ETHERNET.TM and a wide area network (WAN) such as the Internet to facilitate communication with other computers”**].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Houser into the

Art Unit: 2135

teaching of Herrmann and Brown to use tracking (serial) number and transmit at least a copy of digital signature. The modification would be obvious because one of ordinary skill in the art would be motivated to have tracking (serial) number for track the data and transmit at least a copy of digital signature to store as a future reference.

As per claim 59, the rejection of claim 57 is incorporated and is rejected for the same reason set forth in the rejection of claim 49 above.

As per claim 64, the rejection of claim 61 is incorporated and further Houser discloses:
a transaction tracking means for requesting a *tracking number* from a transaction server **[Fig.6 component 612 (serial number generator), Fig. 4B component 427 (serial number)]**.

As per claim 65, the rejection of claim 64 is incorporated and further Houser discloses:
the transaction tracking means *transmits the digital signature* to the transaction server **[Fig.1 component 140 (store and/or forward) col. 8 lines 58-61 “the computer may be coupled to a local area network (LAN) such as ETHERNET.TM. and a wide area network (WAN) such as the Internet to facilitate communication with other computers”]**.

As per claim 75, the rejection of claim 72 is incorporated and is rejected for the same reason set forth in the rejection of claim 64 above.

As per claim 76, the rejection of claim 75 is incorporated and is rejected for the same reason set forth in the rejection of claim 65 above.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Holmes (US 6,848,048) discloses a method and apparatus for providing verifiable digital signatures. In one embodiment, a method includes converting, on a computer system, digital data representative of a document into a predetermined format, and applying the predetermined format and a viewer program to a hash function to mathematically operate on the predetermined format and the viewer program and provide a message digest.

Liaguno et al (US 5,729,741) discloses an integrated media image information storage and retrieval system processes information supplied by different types of media.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nirav Patel whose telephone number is 571-272-5936. The examiner can normally be reached on 8 am - 4:30 pm (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

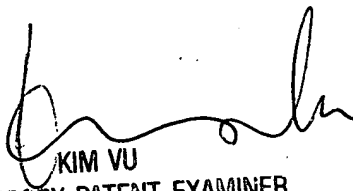
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For

Art Unit: 2135

more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nirav Patel.

5/13/05



KIM VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100